



GeMMe-Georesources and GeoImaging group

Postdoc - Early-Warning to the Impacts of Alluvial Mining on Sensitive Areas Using Earth Observation (EO-ALLert)

In collaboration with United Nations Environment Programme and GRID-Geneva

The GeMMe-Georesources and GeoImaging group at the University of Liege, Belgium is looking for a postdoctoral researcher with an excellent track record to apply for a one year postdoc for the project EO-ALLert. EO-ALLert is a 12-month “post-doctoral research project” funded by EIT RawMaterials and Internal Market, Industry, Entrepreneurship and SMEs – DG GROW through the RawMatCop Programme <https://eitrawmaterials.eu/eit-rm-academy/rawmatcop/>.

The candidate should hold a PhD with experience in multispectral image processing, data fusion techniques, spatio-temporal analysis, and GIS and be available immediately. Experience with radar imaging is a plus.

Interested candidates are invited to send CV and motivation letter to gemme@uliege.be before 19/09/2019 23:00 - Europe/Brussels

About the project

Project EO-ALLert aims to provide the means for development agencies and authorities to identify priority areas to be preserved from the impacts of alluvial small-scale mining, which, in many cases, is an informal activity. It considers the case of gold mining in Colombia. The project aims to provide impartial and integrated information based on stakeholder priorities and scientifically and geo-spatially based decisions. This information aims at contributing to suitable planning in the issuing of mining titles and licenses and efficient and well-designed interventions to stop informal activities that may impact identified “sensitive areas”.

The applications of this work are not limited to Colombia. Small-scale and artisanal mining exist in many parts of the developing world and produce the majority of worldwide sapphire and about 20% of gold and diamond. While this type of mining provides livelihood to families in rural areas, it impacts the landscape, degrades the land, and can contaminate the food chain with heavy metals.

The project will be carried out in collaboration with United Nations Environment Programme (UN Environment) and the Global Resource Information Database (GRID-Geneva) that co-develop and manage the MapX geo-spatial platform (www.mapx.org). Furthermore, project EO-ALLert will be based on the successful outputs of its preceding RawMatCop project CopX that established great relations between ULiège, UN Environment and GRID-Geneva, and various Colombian stakeholders.

About the University

The University of Liege (www.uliege.be) is a comprehensive university welcoming more than 23000 students, 3000 researchers and 2000+ PhD students. The University of Liege hosts the Liege Space Centre, a major partner of the European Space Agency, offering all facilities for space research and in particular support to young entrepreneurs. The University of Liege is also a core-partner of EIT Raw Materials that is funding the current project along with Internal Market, Industry, Entrepreneurship and SMEs – DG GROW through the RawMatCop Programme. Thus, GeMMe as such is leading major research project in the raw materials sector from exploration to recycling of metals using various tools, including Earth observation.

About the GeMMe research group

Specialized in the development of digital micro/macro imaging technologies for the mineral's industry, the GeMMe group has progressively extended its know how towards airborne and spaceborne optical imaging techniques. Back in 1999, the GeMMe developed a joint expertise in multispectral imaging with the Liege Space Center leading to the creation of the KeyObs start up company. Thereafter GeMMe worked on remote sensing applications for geological exploration in the Andes Cordillera of Bolivia and Peru. The processing of airborne hyperspectral data to analyze the impact of industrial and mining activities as well as the use of similar technologies in core-scanning were the next steps in this process with a special interest in recent years for research into new spatio-spectral classification tools. Since 2017, GeMMe has focused on the use of freely available acquisition of Sentinel-2 for applications related to the extractive sector from the large industrial mining scale to small-scale mining. GeMMe is a member of EARSeL (European Association of Remote Sensing Laboratories).